

REMARKS

Drawing Objection

The Examiner has objected to Figure 1 and has suggested the Applicant amend the drawing to read "Prior Art." The Applicant disagrees with the Examiner's statement that Figure 1 only illustrates that which is old, and the Applicant does not intend, nor was it ever stated, that Figure 1 be considered prior art. Amendments to the specification have been presented this effect. Support for the amendments is found throughout the original specification.

As stated in paragraph [0018] of the application, "Fig. 1 shows a simplified optical schematic diagram of the optical components of a projection system 100." Figure 1 introduces the optical components involved in an embodiment of the present invention in order to present a simplified, progressive context to discuss how the components may interact with one another. The figures and discussion following Figure 1 further expound on novel aspects of certain embodiments that were not readily shown in the simplified optical schematic diagram of Figure 1. For example, as stated in paragraph [0018] the "folding arrangement of the present invention is described in detail in Figs. 2-4, and is not shown in Fig. 1 for simplicity."

Because Fig. 1 presents a context for discussion of novel aspects of embodiments of the present invention, the Applicant respectfully requests that the Examiner withdraw his objection to Fig. 1.

35 U.S.C. 102(b) rejection of claim 9 over AAPA

In the Office Action claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by AAPA. The Applicant respectfully traverses this rejection of this claim.

The Examiner identifies the AAPA as including Figure 1 along with the corresponding discussion. However, as discussed above, Figure 1 and corresponding discussion is not admitted prior art and therefore an anticipation rejection based thereupon is inappropriate. Therefore the Applicant respectfully requests that the

Examiner withdraw this rejection of this claim.

35 U.S.C. 103 rejection of claims 1-14 over Miyawaki

In the Office Action claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki. The Applicant respectfully traverses this rejection of these claims.

Claim 1, for example, reads:

1. An image display apparatus, comprising:
 - a source unit to generate a spatially uniform light beam that propagates along a first beam path in a first direction;
 - an imaging unit to collect and focus the light beam, wherein the imaging unit includes;
 - a first refractive optical element disposed in the first beam path,
 - a second refractive optical element disposed in the first beam path,
 - a first reflecting mirror disposed in the first beam path, and
 - a second reflecting mirror disposed in a second beam path defined by the first reflecting mirror and the second reflecting mirror, wherein the second beam path is oriented in a second direction different from the first direction, and wherein the second reflecting mirror has a concave reflecting surface;
 - a digital micromirror device ("DMD") to receive the light beam reflected by the second reflecting mirror and disposed in a third beam path defined by the second reflecting mirror and the DMD, wherein the third beam path is oriented in a third direction different from the second direction; and
 - a projection lens to collect and project the light beam reflected from the DMD and disposed in a fourth beam path defined by the DMD and the projection lens, wherein the fourth beam path is oriented in a fourth direction different from the third direction.

The Examiner has not provided a prior art reference to suggest or teach a first and second refractive optical element disposed in the first beam path as required by claim 1, for example.

The Examiner concedes that "Miyawaki does not disclose in this particular embodiment a 1st and 2nd refractive optical element disposed in the first beam path." The Examiner then goes on to state that it would be obvious to modify Miyawaki to include refractive optical elements "as done in Applicant's admitted prior art (Fig 1), in

order to provide mirror 303 with a coherent light beam from light source 301." Office Action page 4.

As discussed above, Figure 1 is not admitted prior art and therefore it is improper for the Examiner to rely on elements of Figure 1 as a basis of an obviousness rejection. Therefore because the Examiner has failed to provide a reference to teach or suggest every element of the rejected claim 1, an obviousness rejection is improper.

Even if one were to assume that the Examiner had provided a prior art reference including a 1st and 2nd refractive optical element on the first light path, which the Applicant disputes, the Examiner still has not provided a reference to teach or suggest the use of a second reflecting mirror with a concave reflecting surface disposed in a second beam path, as required by claim 1, for example.

The Examiner concedes that the Miyawaki does not disclose a concave mirror but goes on to state that it is "widely known that mirror[s] come in a variety of shapes including concave and convex etc," and that "the position of the beam received and reflected by the mirror would determine the ideal shape." Office Action, page 4.

The Applicant traverses this statement. Although it may be known that there are concave and convex mirrors, the Applicant does not agree that the position of the beam received and reflected by the mirror would determine the ideal shape, as the Examiner states. The Applicant disputes this because concave mirrors and flat mirrors do not provide the same function. For example, a flat mirror is used simply to redirect light, while a concave mirror may exhibit image-forming or focusing properties. Because a concave mirror and a flat mirror serve two different purposes, and because nothing the Examiner has provided shows the motivation to substitute a concave mirror (along with its associated properties) for the flat mirror of the Miyawaki, an obviousness rejection based on Miyawaki is improper.

Thus, Applicant respectfully submits that because all of the claim limitations of claim 1, for example, are not taught or suggested by the cited article, an anticipation rejection is improper. Of course, there are other bases on which claim 1 may be distinguished from the cited article and Applicant does not rely solely on the distinctions

above; however, these are believed to be more than sufficient to overcome this rejection. It is therefore respectfully requested that the Examiner withdraw the rejection of claim 1.

Claims 2-8 depend from and include the same limitations as claim 1. Therefore, for at least the same reasons stated above, claims 2-8 are patentably distinct from Miyawaki. The Applicant respectfully requests that the Examiner withdraw the rejection of these claims.

Claims 9-14 include similar limitations as claim 1. Specifically claims 9-14 include a second beam path defined by a first reflecting mirror and a second (concave) reflecting mirror. Therefore, because the Examiner has not provided a reference to teach or suggest the use of a second reflecting mirror with a concave reflecting surface disposed in a second beam path, as required by claim 9, for example, an obviousness rejection is improper. The Applicant respectfully requests that the Examiner withdraw the rejection of these claims.

CONCLUSION


In view of the foregoing, the Applicant respectfully submits that claims 1-14 are in condition for allowance. Thus, early issuance of Notice of Allowance is respectfully requested.

If the Examiner has any questions, he is invited to contact the undersigned at (503) 796-2972.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393. A Fee Transmittal is enclosed in duplicate for fee processing purposes.

Respectfully submitted,
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